

REMARKS

The drawings have been objected to under 37 CFR 1.83(a) because they fail to show the conical shape of the inner cavity of the coil as described in the specification, and as specified in the claims. Being filed herewith is a Transmittal of Corrected Drawing Figure 2 and attached to this response is a redlined copy of that corrected drawing showing the changes that have been made. Specifically, the Examiner is asked to note that Figure 2 has been amended to show the slightly conical shape of the inner cavity of the coil. However it needs to be noted that the cone angle in Figure 2 is exaggerated, since a cone angle having a value of $\tan \alpha$ between 0.001 and 0.01 is imperceptible or barely perceptible to the human eye.

The disclosure was objected to for the specific reason set forth in numbered paragraph 5 of the Office Action, and by the foregoing proposed amendments to the specification, the Examiner will note that appropriate correction has been made to overcome the objection to the specification.

Claims 4-7 have been objected to because of the informalities noted in paragraphs 6 and 7 of the Office Action, and by the foregoing proposed amendments to the claims, the Examiner will please note that the informalities that gave rise to the claim objections to claims 4-7 and 5 and 6 have been corrected.

Claim 3 was rejected under 35 U.S.C. §112, second paragraph, for the specific reasons set forth in paragraph 9 of the Office Action, and by the foregoing proposed amendments to claim 3, the Examiner will note that the basis for rejection of the claim under 35 U.S.C. §112, second paragraph, has been corrected.

Turning now to the prior art rejections, claims 1-7 and 9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Raholijaona et al.; and claim 8 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto in view of Raholijaona et al., as applied to claim 1 and further in view of Hayama et al. For the reasons that follow, Applicant traverses these prior art grounds for rejecting the claims of the present application.

In the Office Action, claims 1 to 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto and Raholijaona et al. on the argument that Okamoto discloses coils wound around a toroidal magnetic core, a base plate located at one side of the core and having terminals, and a protection plate located on an opposite side of the base plate, whereas Okamoto does not disclose insertion of the magnetic core, but Raholijaona discloses a method of inserting a coil on a core such that it would be obvious to combine the teaching of Okamoto and Raholijaona to arrive at the invention according to claim 1.

Contrary to the opinion expressed in the Office Action, Applicant believes that the invention according to claim 1 is non-obvious over Okamoto and Raholijaona et al for the following reasons.

Okamoto discloses a choke coil comprising two separate coils 291, 292 wound around a continuous toroidal magnetic core 22 (see Figures 1a, 1b ,2a, 2b,). Each of the windings 291, 292 is connected to respective terminals 29 via holes 290 through the base 21. If the base 21 and terminals 29 are to be considered as a connector, Okamoto does not disclose an end plate in the sense of the claimed invention. Moreover, there is no end plate and connector arranged at respective first and second ends of the coil mounted on the magnetic core, as required by claim 1. In this regard, it may be noted that the end of the coils 291, 292 distant from the base 21 (that is adjacent to the top wall of the protection plate 23 in Fig. 1a) is not arranged next to an end plate. Moreover, there is no central cavity in either an end plate or connector of the choke coil in Okamoto.

Raholijaona discloses a coil inserted on a split toroidal core, however, there is no connector nor end plate mounted on the core. There would be no motivation for the skilled person to use the teachings of Raholijaona to modify the choke coil according to Okamoto, to arrive at the claimed invention, since the magnetic core of the choke coil of Okamoto is not split like the magnetic core in Raholijaona, and therefore a coil could not be inserted on the core of Okamoto. It may be further

noted that the skilled person would not split the core of the choke coil according to Okamoto, since this would significantly increase the leakage flux.

Okamoto teaches exactly the opposite, in other words, seeks to reduce leakage flux (see for example column 2, lines 61, to column 3, line 8).

Moreover, even if the skilled person would attempt to combine Okamoto with Raholijaona, he would not arrive at the claimed invention, since neither discloses a connector nor an end plate comprising a central cavity in which the magnetic core is inserted.

Claim 1 is thus believed to be non-obvious for the foregoing reasons.

Neither Raholijaona nor Okamoto discloses a slightly conical shape in the inner cavity of the coil, the features of claims 2 and 3 thus being absent from the teachings in the prior art and non-obvious to the skilled person.

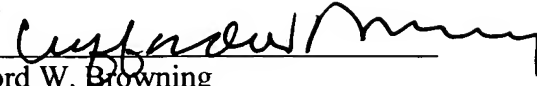
Since the end plate is absent from both Raholijaona and Okamoto, claim 8 which specifies that the end plate comprises a guide portion around which the coil is wound, is also not taught in the cited prior art and non-obvious to a skilled person.

Claim 9 which specifies that the connector comprises a guide portion wound around which the coil is wound is also neither taught, disclosed nor suggested in the cited prior art and therefore non-obvious to the skilled person.

Claims 4 to 7 that now define process steps should be allowable since they define a novel process for making the coil of claim 1, which is believed to be allowable over the prior art.

For the foregoing reasons, the Examiner's suggestions are believed to have been traversed and Claims 1-9, as amended, are believed to be allowable.

Respectfully submitted,

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